

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Cancel claim 19.

Amend claims 4 and 20 as follows.

Add new claims 23-54.

**Listing of Claims:**

- 1                    1. **(Original)** A work-management method comprising:  
2                    determining a probability of availability at a future point in time of  
3 each of a plurality of resources;  
4                    combining the probabilities to obtain a number; and  
5                    using the number to schedule new tasks for the resources for the  
6 future point in time.  
7
- 8                    2. **(Original)** The method of claim 1 wherein:  
9                    using comprises  
10                    scheduling for the future point in time no more than the number of the  
11 new tasks to become available for servicing by the plurality of the resources.
- 1                    3. **(Original)** The method of claim 1 wherein:  
2                    combining comprises  
3                    summing the probabilities to obtain the number.
- 1                    4. **(Currently Amended)** The method of claim 1 ~~wherein~~ wherein:  
2                    determining comprises  
3                    for each of the resources, determining an amount of time  $t$  that the  
4 resource has been servicing a task by now;

5                   for each of the resources, determining a probability  $F(t+h)$  of the  
6   resource servicing its task to completion within a total amount of time  $t+h$ , where  
7    $h$  is an amount of time;  
8                   for each of the resources, determining a probability  $F(t)$  of the  
9   resource completing servicing its task by now; and  
10                  for each of the resources, determining a probability  $P$  that the  
11   resource will complete servicing its task at the future point in time the amount of  
12   time  $h$  from now as  $\frac{F(t+h) - F(t)}{1 - F(t)}$ .

1                   5. **(Original)** The method of claim 1 in a call center wherein:  
2                   tasks comprise calls; and  
3                   scheduling comprises  
4                   in response to  $P$ , determining whether or not to initiate or cancel an  
5   outbound call.

1                   6. **(Previously presented)** A work-management method  
2   comprising:  
3                   determining an amount of time  $t$  that a resource has been servicing a  
4   task by now;  
5                   determining a probability  $F(t+h)$  of the resource servicing the task to  
6   completion within a total amount of time  $t+h$ , where  $h$  is an amount of time;  
7                   determining a probability  $F(t)$  of the resource completing servicing the  
8   task by now;  
9                   determining a probability  $P$  that the resource will complete servicing  
10   the task within the amount of time  $h$  from now as  $\frac{F(t+h) - F(t)}{1 - F(t)}$ ; and  
11                  in response to  $P$ , scheduling another task for servicing.

1                   7. **(Original)** The method of claim 6 wherein:  
2                   scheduling comprises

3 in response to  $P$ , determining whether or not to initiate said another  
4 task.

1 8. **(Original)** The method of claim 6 in a call center wherein:  
2 tasks comprise calls; and  
3 scheduling comprises  
4 in response to  $P$ , determining whether or not to initiate an outbound  
5 call.

1 9. **(Original)** The method of claim 6 further comprising:  
2 performing the determining steps for a plurality of resources, and  
3 determining a number of the resources that will likely have completed  
4 servicing their respective tasks within the amount of time  $h$  from now as a sum of  
5 the probabilities  $P$  determined for individual ones of the plurality of resources;  
6 wherein  
7 scheduling comprises  
8 in response to determining the number of the resources, scheduling  
9 new tasks for servicing.

1 10. **(Original)** The method of claim 9 wherein:  
2 scheduling tasks for servicing comprises scheduling no more than  
3 the number of the tasks for servicing.

1 11. **(Original)** The method of claim 6 wherein:  
2 determining a probability  $F(t+h)$  comprises  
3 obtaining historical task-completion statistics, and  
4 from the obtained statistics determining the probability  $F(t+h)$ ; and  
5 determining a probability  $F(t)$  comprises  
6 from the obtained statistics determining the probability  $F(t)$ .

1 12. **(Original)** The method of claim 11 wherein:  
2 obtaining historical task-completion statistics comprises  
3 obtaining a mean and a variance of time historically spent by  
4 resources on servicing tasks to completion.

1           13. **(Original)** The method of claim 6 wherein:  
2           determining a probability  $F(t+h)$  comprises  
3           obtaining historical task-completion statistics,  
4           fitting the task-completion statistics into a lifetime closed-form  
5           cumulative-probability distribution to determine parameters of the distribution,  
6           and  
7           evaluating the distribution with the determined parameters and the  
8           total amount of time  $t+h$  to obtain  $F(t+h)$  ; and  
9           determining a probability  $F(t)$  comprises  
10          evaluating the distribution with the determined parameters and the  
11          amount of time  $t$  to obtain  $F(t)$ .

1           14. **(Original)** The method of claim 13 wherein:  
2           obtaining historical task-completion statistics comprises  
3           obtaining a mean and a variance of time historically spent by  
4           resources on servicing tasks to completion;  
5           the cumulative-probability distribution  $F$  comprises a Weibull  
6           distribution; and  
7           the parameters comprise a dispersion parameter and a parameter of  
8           central tendency.

1           15. **(Original)** The method of claim 6 wherein:  
2           determining an amount of time  $t$  comprises  
3           determining the amount of time  $t$  that the resource has been servicing  
4           a task of one of a plurality of different types of tasks; and  
5           determining historical task-completion statistics comprises  
6           determining the historical task-completion statistics for the one type  
7           of tasks.

1           16. **(Original)** The method of claim 6 wherein:  
2           scheduling another task comprises  
3           in response to  $P$  initiating preparation of a task that may require  
4           servicing by an agent at a later time.

1           17. **(Original)** The method of claim 6 wherein:  
2           determining a probability  $F(t+h)$  comprises  
3           obtaining a historical histogram for task completion, and  
4           evaluating a cumulative said probability with the obtained histogram  
5   for the total amount of time  $t+h$  to obtain  $F(t+h)$ ; and  
6           determining a probability  $F(t)$  comprises  
7           evaluating the cumulative probability with the obtained histogram for  
8   the amount of time  $t$  to obtain  $F(t)$ .

1           18. **(Original)** The method of claim 6 wherein:  
2           scheduling comprises  
3           in response to  $P$ , canceling preparation of a task that could require  
4   servicing by a resource.

5           19. **(Canceled)**

1           20. **(Amended)** A computer-readable medium containing  
2   instructions which, when executed in a computer, cause the computer to perform  
3   the method of one of claims 1-18, steps of:  
4           determining a probability of availability at a future point in time of  
5   each of a plurality of resources;  
6           combining the probabilities to obtain a number; and  
              using the number to schedule new tasks for the resources for the  
              future point in time.

7           21. **(Original)** A work-management apparatus comprising:  
8           means for determining a probability of availability at a future point in  
9   time of each of a plurality of resources;  
10           means cooperative with the determining means for combining the  
11   probabilities to obtain a number; and

12 means cooperative with the combining means for scheduling for the  
13 future point in time no more than the number of new tasks for servicing by the  
14 plurality of the resources.

1 22. **(Previously presented)** A work-management apparatus  
2 comprising:  
3 means for determining an amount of time  $t$  that a resource has been  
4 servicing a task by now;  
5 means cooperative with the time-determining means for determining  
6 a probability  $F(t+h)$  of the resource servicing the task to completion within a total  
7 amount of time  $t+h$ , where  $h$  is an amount of time;  
8 means cooperative with the time-determining means for determining  
9 a probability  $F(t)$  of the resource completing servicing the task by now;  
10 means cooperative with both of the probability-determining means for  
11 determining a probability  $P$  that the resource will complete servicing the task  
12 within the amount of time  $h$  from now as  $\frac{F(t+h) - F(t)}{1 - F(t)}$ ; and  
13 means cooperative with the  $P$ -determining means and responsive to  
14  $P$  for scheduling another task for servicing.

15  
16 23. **(New)** The apparatus of claim 21 wherein:  
17 the means for combining comprise  
18 means for summing the probabilities to obtain the number.

1 24. **(New)** The apparatus of claim 21 wherein:  
2 the means for determining comprise  
3 means for determining, for each of the resources, an amount of time  $t$   
4 that the resource has been servicing a task by now;  
5 means for determining, for each of the resources, a probability  $F(t+h)$   
6 of the resource servicing its task to completion within a total amount of time  $t+h$ ,  
7 where  $h$  is an amount of time;

8 means for determining, for each of the resources, a probability  $F(t)$  of  
9 the resource completing servicing its task by now; and

means for determining, for each of the resources, a probability  $P$  that  
the resource will complete servicing its task at the future point in time the amount  
of time  $h$  from now as  $\frac{F(t+h) - F(t)}{1 - F(t)}$ .

10 25. **(New)** The apparatus of claim 21 in a call center wherein:

11 tasks comprise calls; and

12 the means for scheduling comprise

13 means responsive to  $P$ , for determining whether or not to initiate or

14 cancel an outbound call.

15 26. **(New)** The apparatus of claim 22 wherein:

16 the means for scheduling comprise

17 means responsive to  $P$ , for determining whether or not to initiate said

18 another task.

19 27. **(New)** The apparatus of claim 22 in a call center wherein:

20 tasks comprise calls; and

21 the means for scheduling comprise

22 means responsive to  $P$ , for determining whether or not to initiate an

23 outbound call.

1 28. **(New)** The apparatus of claim 22 wherein:

2 the means for determining an amount of time  $t$  comprise

3 means for determining the amount of time  $t$  for each of a plurality of  
4 resources;

5 the means for determining a probability  $F(t+h)$  comprise

6 means for determining the probability  $F(t+h)$  for each of the plurality  
7 of resources;

8 the means for determining a probability  $F(t)$  comprise

9 means for determining the probability  $F(t)$  for each of the plurality of  
10 resources, and  
11 means for determining a number of the plurality of resources that will  
12 likely have completed servicing their respective tasks within the amount of time  $h$   
13 from now as a sum of the probabilities  $P$  determined for individual ones of the  
14 plurality of resources; and  
15 the means for scheduling comprise  
16 means responsive to determining the number of the resources, for  
17 scheduling new tasks for servicing.

1 29. **(New)** The apparatus of claim 28 wherein:  
2 the means for scheduling comprise  
3 means for scheduling no more than the number of the tasks for  
4 servicing.

5 30. **(New)** The apparatus of claim 22 wherein:  
6 the means for determining a probability  $F(t+h)$  comprise  
7 means for obtaining historical task-completion statistics, and  
8 means for determining the probability  $F(t+h)$  from the obtained  
9 statistics; and  
10 the means for determining a probability  $F(t)$  comprise  
11 means for determining the probability  $F(t)$  from the obtained statistics.

1 31. **(New)** The apparatus of claim 30 wherein:  
2 the means for obtaining historical task-completion statistics comprise  
3 means for obtaining a mean and a variance of time historically spent  
4 by resources on servicing tasks to completion.

1 32. **(New)** The apparatus of claim 22 wherein:  
2 the means for determining a probability  $F(t+h)$  comprise  
3 means for obtaining historical task-completion statistics,



4 means for fitting the task-completion statistics into a lifetime closed-  
5 form cumulative-probability distribution to determine parameters of the  
6 distribution, and  
7 means for evaluating the distribution with the determined parameters  
8 and the total amount of time  $t+h$  to obtain  $F(t+h)$ ; and  
9 the means for determining a probability  $F(t)$  comprise  
10 means for evaluating the distribution with the determined parameters  
11 and the amount of time  $t$  to obtain  $F(t)$ .

1 33. **(New)** The apparatus of claim 32 wherein:  
2 the means for obtaining historical task-completion statistics comprise  
3 means for obtaining a mean and a variance of time historically spent  
4 by resources on servicing tasks to completion;  
5 the cumulative-probability distribution  $F$  comprises a Weibull  
6 distribution; and  
7 the parameters comprise a dispersion parameter and a parameter of  
8 central tendency.

1 34. **(New)** The apparatus of claim 22 wherein:  
2 the means for determining an amount of time  $t$  comprise  
3 means for determining the amount of time  $t$  that the resource has  
4 been servicing a task of one of a plurality of different types of tasks; and  
5 the means for determining historical task-completion statistics  
6 comprise  
7 means for determining the historical task-completion statistics for the  
8 one type of tasks.

1 35. **(New)** The apparatus of claim 22 wherein:  
2 the means for scheduling another task comprise  
3 means responsive to  $P$  for initiating preparation of a task that may  
4 require servicing by an agent at a later time.

1           36. **(New)** The apparatus of claim 22 wherein:  
2           the means for determining a probability  $F(t+h)$  comprise  
3           means for obtaining a historical histogram for task completion, and  
4           means for evaluating a cumulative said probability with the obtained  
5 histogram for the total amount of time  $t+h$  to obtain  $F(t+h)$ ; and  
6           the means for determining a probability  $F(t)$  comprise  
7           means for evaluating the cumulative probability with the obtained  
8 histogram for the amount of time  $t$  to obtain  $F(t)$ .

1           37. **(New)** The apparatus of claim 22 wherein:  
2           the means for scheduling comprise  
3           means responsive to  $P$ , for canceling preparation of a task that could  
4 require servicing by a resource.

1           38. **(New)** The medium of claim 20 wherein:  
2           using comprises  
3           scheduling for the future point in time no more than the number of the  
4 new tasks to become available for servicing by the plurality of the resources.

1           39. **(New)** The medium of claim 20 wherein:  
2           combining comprises  
3           summing the probabilities to obtain the number.

1           40. **(New)** The medium of claim 20 wherein:  
2           determining comprises  
3           for each of the resources, determining an amount of time  $t$  that the  
4 resource has been servicing a task by now;  
5           for each of the resources, determining a probability  $F(t+h)$  of the  
6 resource servicing its task to completion within a total amount of time  $t+h$ , where  
7  $h$  is an amount of time;  
8           for each of the resources, determining a probability  $F(t)$  of the  
9 resource completing servicing its task by now; and

10                   for each of the resources, determining a probability  $P$  that the  
11   resource will complete servicing its task at the future point in time the amount of  
12   time  $h$  from now as  $\frac{F(t+h) - F(t)}{1 - F(t)}$ .

1                   **41. (New)** The method of claim 20 for a call center wherein:  
2                   tasks comprise calls; and  
3                   scheduling comprises  
4                   in response to  $P$ , determining whether or not to initiate or cancel an  
5   outbound call.

1                   **42. (New)** A computer-readable medium containing instructions  
2   which, when executed in a computer, cause the computer to perform the steps  
3   of:  
4                   determining an amount of time  $t$  that a resource has been servicing a  
5   task by now;  
6                   determining a probability  $F(t+h)$  of the resource servicing the task to  
7   completion within a total amount of time  $t+h$ , where  $h$  is an amount of time;  
8                   determining a probability  $F(t)$  of the resource completing servicing the  
9   task by now;  
10                  determining a probability  $P$  that the resource will complete servicing  
11   the task within the amount of time  $h$  from now as  $\frac{F(t+h) - F(t)}{1 - F(t)}$ ; and  
12                  in response to  $P$ , scheduling another task for servicing.

1                   **43. (New)** The method of claim 42 wherein:  
2                   scheduling comprises  
3                   in response to  $P$ , determining whether or not to initiate said another  
4   task.

1                   **44. (New)** The medium of claim 42 for a call center wherein:

2 tasks comprise calls; and  
3 scheduling comprises  
4 in response to  $P$ , determining whether or not to initiate an outbound  
5 call.

1 45. **(New)** The medium of claim 42 further comprising instructions  
2 which, when executed in the computer, cause the computer to perform the steps  
3 of:  
4 performing the determining steps for a plurality of resources, and  
5 determining a number of the resources that will likely have completed  
6 servicing their respective tasks within the amount of time  $h$  from now as a sum of  
7 the probabilities  $P$  determined for individual ones of the plurality of resources;  
8 wherein  
9 scheduling comprises  
10 in response to determining the number of the resources, scheduling  
11 new tasks for servicing.

1 46. **(New)** The medium of claim 45 wherein:  
2 scheduling tasks for servicing comprises scheduling no more than  
3 the number of the tasks for servicing.

1 47. **(New)** The medium of claim 42 wherein:  
2 determining a probability  $F(t+h)$  comprises  
3 obtaining historical task-completion statistics, and  
4 from the obtained statistics determining the probability  $F(t+h)$ ; and  
5 determining a probability  $F(t)$  comprises  
6 from the obtained statistics determining the probability  $F(t)$ .

1 48. **(New)** The medium of claim 47 wherein:  
2 obtaining historical task-completion statistics comprises  
3 obtaining a mean and a variance of time historically spent by  
4 resources on servicing tasks to completion.

1           49. **(New)** The medium of claim 42 wherein:  
2           determining a probability  $F(t+h)$  comprises  
3           obtaining historical task-completion statistics,  
4           fitting the task-completion statistics into a lifetime closed-form  
5   cumulative-probability distribution to determine parameters of the distribution,  
6   and  
7           evaluating the distribution with the determined parameters and the  
8   total amount of time  $t+h$  to obtain  $F(t+h)$  ; and  
9           determining a probability  $F(t)$  comprises  
10          evaluating the distribution with the determined parameters and the  
11   amount of time  $t$  to obtain  $F(t)$ .

1           50. **(New)** The medium of claim 49 wherein:  
2           obtaining historical task-completion statistics comprises  
3           obtaining a mean and a variance of time historically spent by  
4   resources on servicing tasks to completion;  
5           the cumulative-probability distribution  $F$  comprises a Weibull  
6   distribution; and  
7           the parameters comprise a dispersion parameter and a parameter of  
8   central tendency.

1           51. **(New)** The method of claim 42 wherein:  
2           determining an amount of time  $t$  comprises  
3           determining the amount of time  $t$  that the resource has been servicing  
4   a task of one of a plurality of different types of tasks; and  
5           determining historical task-completion statistics comprises  
6           determining the historical task-completion statistics for the one type  
7   of tasks.

1           52. **(New)** The medium of claim 42 wherein:  
2           scheduling another task comprises

3                   in response to  $P$  initiating preparation of a task that may require  
4 servicing by an agent at a later time.

1                   53. **(New)** The medium of claim 42 wherein:  
2                   determining a probability  $F(t+h)$  comprises  
3                   obtaining a historical histogram for task completion, and  
4                   evaluating a cumulative said probability with the obtained histogram  
5 for the total amount of time  $t+h$  to obtain  $F(t+h)$ ; and  
6                   determining a probability  $F(t)$  comprises  
7                   evaluating the cumulative probability with the obtained histogram for  
8 the amount of time  $t$  to obtain  $F(t)$ .

1                   54. **(New)** The medium of claim 42 wherein:  
2                   scheduling comprises  
3                   in response to  $P$ , canceling preparation of a task that could require  
4 servicing by a resource.